PgBouncer Postgres connection pooler

CONCEPTS

The admin console is a virtual database named pgbouncer; only admin_users and stats_users may log in.

Client many connections
↓ port 6432
PgBouncer pools by db + user
↓ few server conns
PostgreSQL port 5432

pool_mode decides when a server connection returns to the pool: session (on disconnect), transaction (on commit), statement (after each statement).

In transaction mode, session state (SET, advisory locks, LISTEN, session-level prepared statements) is not reliable across transactions.

RUN AND SIGNALS

pgbouncer *<pgbouncer.ini>*
Start in the foreground

pgbouncer -d *<pgbouncer.ini>*
Run as a daemon

kill -HUP *<pid>*
Reload config (same as RELOAD)

CONNECT TO THE CONSOLE

psql -p 6432 pgbouncer
Admin console on the default port

psql -h *<host>* **-p 6432 -U** *<admin>* **pgbouncer**
Console over TCP as an admin user

psql -p 6432 -U *<user>* *<db>*
Use the pooler like a normal database

INSPECT (SHOW)

SHOW POOLS;
Client and server counts per pool

SHOW STATS;
Totals and averages per database

SHOW CLIENTS;
Connected clients and their state

SHOW SERVERS;
Backend connections and their state

INSPECT (SHOW) (cont.)

SHOW DATABASES;
Configured databases and limits

SHOW CONFIG;
Settings, defaults, runtime-changeable?

CONTROL

RELOAD;
Re-read config, auth_file and HBA file

PAUSE;
Wait for servers to be released, hold clients

RESUME;
Continue after PAUSE or KILL

PGBOUNCER.INI: POOLING

pool_mode = transaction
Release server conn after each transaction

max_client_conn = *<n>*
Max client connections (default 100)

default_pool_size = *<n>*
Server conns per user/db pair (default 20)

ignore_startup_parameters = *<p>*
Ignore these client startup params

PGBOUNCER.INI: NETWORK AND AUTH

listen_addr = *<addr>*
Bind address, comma list or * (unset: socket only)

listen_port = 6432
TCP port to accept clients on

auth_type = scram-sha-256
How clients are authenticated (default md5)

auth_file = *<path>*
Users file (userlist.txt) with names and hashes

admin_users = *<list>*
Users allowed all console commands

PGBOUNCER.INI: TIMEOUTS AND LOGS

query_wait_timeout = *<sec>*
Drop clients waiting too long (default 120)